Nemegtosaurus

Nemegtosaurus (meaning 'Reptile from the Nemegt') was a sauropod dinosaur from Late Cretaceous Period of what is now Mongolia. *Nemegtosaurus* was named after the Nemegt Basin in the Gobi Desert, where the remains — a single skull — were found. The skull resembles diplodocoids in being long and low, with pencil-shaped teeth. However, recent work has shown that *Nemegtosaurus* is in fact a titanosaur, closely related to animals such as *Saltasaurus*,[1] *Alamosaurus* and *Rapetosaurus*.

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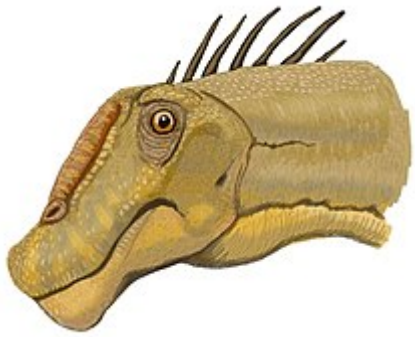
Discovery and taxonomy



A profile view reconstruction of *N. mongoliensis*

The skull of *Nemegtosaurus* comes from the same beds as the titanosaur *Opisthocoelicaudia*, which is known from a skeleton lacking the neck and skull. Originally, the referral of *Nemegtosaurus* to Diplodocoidea and *Opisthocoelicaudia* to Camarasauridae argued that the two represented different species. Both of these genera represent advanced titanosaurians, however, raising the possibility that the two are in fact the same animal.[1] Relocation of the *Nemegtosaurus* type locality in Central Sayr and discovery of postcrania comparable to those *Opisthocoelicauda* holotype at the *Nemegtosaurus* holotype locality has discussed the possibility that *Opisthocoelicauda* is a junior synonym. Consequently, Opisthocoelicaudiinae would be a junior synonym of Nemegtosauridae.[2]

Nemegtosaurus

Temporal range: Late Cretaceous, 70 Ma

Pre€ € O S D C P T J K PgN

Cast of the skull of *Nemegtosaurus*, on a mounted *Opisthocoelicaudia* skeleton, Museum of Evolution of Polish Academy of Sciences, Warsaw

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Clade:	Dinosauria
Clade:	Saurischia
Suborder:	†Sauropodomorpha
Clade:	†Sauropoda
Clade:	†Titanosauria
Clade:	†Lithostrotia
Family:	†Nemegtosauridae
Genus:	†*Nemegtosaurus* Nowinski, 1971

Species

- †*N. mongoliensis* Nowinski, 1971 (type)
- †*N. pachi* Dong, 1977 *(nomen dubium)*

The type species, *Nemegtosaurus mongoliensis*, was first described by Nowinski in 1971 on the basis of **ZPAL MgD-I/9**. A second species, *N. pachi*, was described by Dong in 1977 on the basis of the teeth **IVPP V.4879**, but is a *nomen dubium*.

Biology

Nemegtosaurus is found in the Maastrichtian aged (66-72 Ma) Nemegt Formation, which makes it one of the last sauropods on earth. There, on a lush river delta flowing through the ancient sands of the Gobi Desert, *Nemegtosaurus* would have coexisted with animals like the ornithomimid *Gallimimus*, the alvarezsaurid *Mononykus*, the velociraptorine *Adasaurus*, and the giant, saber-clawed therizinosaur *Therizinosaurus*. It also lived alongside the tyrannosaur *Tarbosaurus*. Its size (estimated at roughly 40 feet long[3]) may have offered an adult some protection against *Tarbosaurus*, but juveniles would have been vulnerable.

Description

A speculative full body restoration of *N. mongoliensis*

Like other titanosaurs, the teeth are slender pencil-like structures that are ground down at a sharp angle to produce a chisel-like tip. The diet of *Nemegtosaurus* is unknown, however. There are no plant fossils from the Gobi, but during the Late Cretaceous, flowering plants became increasingly diverse, although in many environments ferns and conifers were still more common. Neither is it clear whether *Nemegtosaurus* browsed high in the trees or grazed on low-growing plants; related titanosaurs include both long-necked browsing forms like *Rapetosaurus* and short-necked forms like *Bonitasaura*.

Comparisons between the scleral rings of *Nemegtosaurus* and modern birds and reptiles suggest that it may have been cathemeral, active throughout the day at short intervals.[4]

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